THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 11

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALEXANDER SROMIN et al.

Appeal No. 96-1301
Application 08/175,078[1]

ON BRIEF

Before HAIRSTON, MARTIN and LEE, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-5, 7-15, 17-19, 21 and 22. Claims 6, 16 and 20 have been objected to by the examiner as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

References relied on by the Examiner

Hawsey et al. (Hawsey)	Patent 4,996,457	Feb. 26, 1991
Takahashi et al. (Takahashi)	Patent 4,551,645	Nov. 5, 1985

[1] Application for patent filed December 29, 1993.

The Rejections on Appeal

Claim 22 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-5, 7-15, 17-19, 21 and 22 stand rejected under 35 U.S.C. § 102(a) or 102(b) as being anticipated by each of Hawsey and Takahashi.

The appellants further argue against the examiner's objection to an amendment dated August 11, 1994, as containing new matter. However, no claim has been rejected under 35 U.S.C. § 112, first paragraph, as lacking written description support in the specification as filed. Accordingly, the examiner's objection to the amendment is not a proper issue in this appeal but a matter addressable by petition to the Commissioner.

The Invention

The invention is directed to a rotor for use in an electric machine. The rotor comprises a central sheet, which has two faces. Located on each face are one or more permanent magnets. The permanent magnets are oriented such that a magnet located on one face is magnetized in the same direction

as a magnet located directly on the other face of the sheet. Thus, the polar orientation of the magnets on opposite faces is co-directional.

Claim 1 reads as follows:

1. A rotor for use in an electric machine, comprising:

(a) a central member having a pair of opposing faces; and

(b) at least one pair of permanent magnets, each of said at least one pair of permanent magnets including at least a pair of magnet pieces, said magnet pieces of said pair of permanent magnets being connected to said central member opposite from each other on opposing faces of said central member, said pair of magnet pieces characterized in that the polar orientation of said magnet pieces of said pair of permanent magnets is co-directional.

Opinion

We sustain the rejection of claim 22 under 35 U.S.C. § 112, second paragraph. We also sustain the rejection of claims 1-5, 7-15, 17-19, 21 and 22 under 35 U.S.C. § 102(a) or 102(b) as being anticipated by Hawsey. However, we do not sustain the rejection of claims 1-5, 7-15, 17-19, 21 and 22 under 35 U.S.C. § 102(a) or 102(b) as being anticipated by Takahashi.

Our affirmance of the prior art rejection is based only on the arguments presented by appellants in their brief. Arguments not raised in the briefs are not before us, are not at issue, and are not considered.

The Indefiniteness Rejection

The examiner rejected claim 22, stating that "said magnet pieces" lacks antecedent basis, thereby making the claim indefinite. A claim is indefinite when it contains words or phrases which, in context, makes the scope of what is claimed not reasonably clear. Here, claim 22 refers to "said magnet pieces" but no magnet pieces have been previously defined. Accordingly, it is not known what features or limitations have been modified by the reference to "said magnet pieces." Consequently, claim 22 is indefinite.

Prior Art Rejections

For purposes of the prior art rejections, the appellants represent that all rejected claims stand or fall with claim 1. (Brief, at 5).

Appellants' claims 1-5, 7-15, 17-19, 21 and 22 stand finally rejected as being anticipated by Hawsey. Hawsey teaches an alternator with a rotor disposed between a pair of stators (see abstract, lines 5-8). The rotor, which is

disclosed as generally disk shaped has two faces (see abstract, lines 5-8). Magnets are disposed around the periphery of the two faces (see Figs. 2 and 3, column 4, lines 49-51). The polarities of the magnets on the respective faces are alternating in polarity (see column 4, lines 17-21 and column 6, lines 56-60). Furthermore, the polarities of the magnets on the first face are opposite those of the corresponding magnets on the second face, such that the direction of polarization for each is the same.

For example, claim 1 of Hawsey recites a first set of magnets positioned on one face of the rotor and a second set of magnets positioned on the other face of the rotor (see claim 1, lines 14-28). Claim 4 of Hawsey further recites that the first set of magnets on the first face are oriented to provide alternating polarities and that the second set of magnets on the second face are oriented to provide alternating polarities (see claim 4, lines 55-60). Claim 4 of Hawsey also provides that the polarities of the second set of magnets are opposite the polarities of the first set of magnets across the central layer of the rotor (see claim 4, lines 61-63), indicating that the polar orientation of the magnets is co-directional.

Appellants argue that the magnetic fields in Hawsey are anti-directional, because in the Hawsey device the central member acts as a magnetically insulating yoke so as to prevent magnetic fluxes from passing through the central member. The appellants point out that in the present invention the central member is such that the magnetic fluxes are passed through. (Brief, at 9).

Appellants appear to suggest that the language of appellants' claim 1 requires the magnetic flux to flow through the central member. We do not interpret appellants' claim 1 so narrowly. Appellants' claim 1 recites a rotor with a central member having two faces. Magnet pieces are connected to both faces of the central member such that the polarities of the magnet pieces on the first face are co-directional to that of the magnet pieces on the second face. As recited in claim 1, "the polar orientation of said magnet pieces [on the opposite faces]... is co-directional". Thus, the claim merely requires that the polar orientation of the magnet pieces on the opposite faces be co-directional and does not further specify whether magnetic lines of force can pass through the central member. Depending on the make-up or nature of the central member, magnetic flux lines may or may not be passed

through, regardless of whether the polarities of the magnet pieces on the opposite faces are co-directional.

We agree with the appellants that Hawsey's central member of the rotor prevents magnetic flux lines from passing through (see Hawsey abstract, lines 8-12, and column 3, lines 2-6). We further understand that the central member of the appellants' disclosed invention enables magnetic flux (see Fig. 3a and page 9, lines 2-8) to flow therethrough. However, the appellants' argument is not commensurate in scope with the breadth of appellants' claim 1. To rebut the anticipation rejection, what the appellants must demonstrate is that in Hawsey the polarities of the magnet pieces on the opposite faces of the central member are not co-directionally oriented, not that in Hawsey the magnetic flux lines do not pass through the central member.

Claim 1 of the Hawsey patent recites a rotor comprising: 1) a first layer of material joined to a first surface of a central layer; 2) a second layer of material joined to a second surface of the central layer; 3) a first set of magnets positioned within said first layer of material; and 4) a second set of magnets positioned within said second layer of material (see claim 1, subsections a-e).

Claim 4 of the Hawsey patent further recites that: 1) the first set of magnets are oriented to provide alternating polarities; 2) the second set of magnets are oriented to provide alternating polarities; and 3) the polarities of the second set of magnets <u>are opposite the polarities of the first set of magnets</u> across the central layer of the rotor.

The Hawsey claim language indicates that the polar orientation of the magnets are co-directional, because the polarities of the magnets on the first layer are opposite the polarities of the corresponding magnets on the second layer. Opposite polarities on opposing faces result in magnetic fields that are co-directional. See applicants' Figure 3a. Therefore, Hawsey meets the limitation that "the polar orientation of said magnet pieces of said pair of permanent magnets is co-directional."

Appellants draw attention to the prior art Fig. 3b of the instant application, which is the appellants' interpretation of the Hawsey invention. Appellants assert that the "co-directionality of opposing magnetic pieces in a rotor according to the present invention is in sharp contrast with the Hawsey configuration wherein corresponding magnets on

opposite sides of the central member are oriented so that their magnetic fields are opposed." (Brief, at 8).

Our reading of the Hawsey disclosure does not reveal that its magnet pieces are positioned as the appellants say they are as is shown in appellants' Fig. 3b. Instead, as is indicated in the claim language of the Hawsey patent (i.e. claims 4, 13 and 18) the second set of magnets are oriented such that the polarities of the second set of magnet pieces are opposite the polarities of the first set of magnet pieces across the central member, as is the case with the appellants' claimed invention shown in Fig. 3a. The magnetic lines of force in Hawsey do not cross the central member, because in Hawsey, the rotor's central member includes an isolator to isolate the magnet pieces on the opposite faces from each other. See Hawsey in column 3, lines 2-4. That is not excluded by the appellants' claim 1.

Appellants' claims 1-5, 7-15, 17-19, 21 and 22 stand finally rejected as being anticipated by Takahashi. Takahashi teaches a central member 9 of a rotor with magnets 1 secured to the central member, as shown in Fig. 8. The examiner states that Takahashi teaches "a 2 m field magnet consisting of north and south poles alternately positioned". But this

arrangement is shown in Figs. 9, 10 and 17, where the magnets are alternating in polarity on the same side. The examiner has not shown where Takahashi teaches that the polar orientation of the magnets on opposing faces of the central member is co-directional.

We agree with appellants that the Takahashi disclosure is limited to a discussion of one side of the central member. The Takahashi reference is silent with respect to the orientation of the magnets attached to the opposite faces of the central member. Polar orientation is discussed only with respect to magnets on one side. The examiner may not resort to speculation to produce the missing parts. The rejection based on Takahashi is without merit.

Conclusion

The rejection of claim 22 under 35 U.S.C. § 112, second paragraph is affirmed.

The rejection of claims 1-5, 7-15, 17-19, 21 and 22 under 35 U.S.C. § 102(a) or 102(b) as being anticipated by Hawsey is affirmed.

The rejection of claims 1-5, 7-15, 17-19, 21 and 22 under 35 U.S.C. § 102(a) or 102(b) as being anticipated by Takahashi is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR §1.136(a).

AFFIRMED

KENNETH W. HAIRSTON Administrative Patent Judge	)
JOHN C. MARTIN Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
JAMESON LEE Administrative Patent Judge	)

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